

AMENDMENTS TO THE CLAIMS

1. (currently amended) A method for addressing a network extension element for a synchronous optical network, comprising:

addressing an extension network element using a modified [[TLI]] TL1 message including a session identifier in a field of the modified [[TLI]] TL1 message that originally contained an ~~extended~~ extension network element identifier in an original [[a]] TL1 message to set up a SONET connection;

transmitting a response to the modified [[TLI]] TL1 message including the session identifier back to a network element;

determining a port to transmit the response based on the session ID included in the response;

replacing the session ID in the response with the extension network element identifier; and

forwarding a modified response including the extension network element identifier to a source network element that transmitted the original TL1 message using the port.

2. (currently amended) The method according to claim 1, further comprising:

receiving the modified TL1 message including the extension network element identifier in the field of the modified TL1 message at a network element specified in a TID field of the TL1 message, wherein the field is a general field in the original TL1 message;

replacing the extension network element identifier with the session identifier; and

transmitting the modified TL1 message to [[an]] the extension network element.

3. (previously presented) The method according to claim 2, further comprising:

receiving the modified TL1 message at the extension network element; and

processing the modified TL1 message at the extension network element

4. (previously presented) The method according to claim 3, further comprising:

accepting the command response at the network element.

5. (currently amended) A method of extending an optical network, comprising:

receiving a command message from the optical network including a port identifier specifying the port of a network element that is connected to an extension network element;

replacing the port identifier with a session identifier in the command message prior to the transmitting the command message to the extension network element

sending a response message to the network element;

determining a port to transmit the response based on [[the]] a session identifier included in the response;

replacing the session identifier of the response with the extension network element identifier of the response; and

forwarding a modified response to a second network element.

6. (previously presented) The method according to claim 5, further comprising:

identifying a data communication channel corresponding to the port identifier; and

transmitting the command message to the extension network element over the identified data communication channel.

7. (cancelled)

8. (cancelled)

9. (previously presented) The method according to claim 5, further comprising:

transmitting the response message over the network.

10. (currently amended) A system for extending an optical network, comprising:

an extension network element for connection to a network element;

wherein the extension network element is configurable to:

receive a modified command message messages from the network element that includes a session identifier in a field of the modified command message messages that originally contained an extended network element identifier; and

transmit a response to the modified command message messages including the session identifier back to the [[a]] network element; and

wherein the network element is configured to:

determine a port to transmit the response based on the session identifier included in the response;

replace the session identifier with the extension network element identifier of the response; and

forward a modified responses to respective source network elements that transmitted original command messages.

11. (cancelled)

12. (previously amended) The system according to claim 10, wherein the extension network element exchanges command messages and responses with the network element via a data communication channel connection.

13. (previously presented) The system according to claim 10, wherein the extension network element does not have a separate terminal identification stored in the routing table of network elements within the network to which the extension network element is connected.